

Title (en)  
Convex-shaped diamond cutting elements.

Title (de)  
Konvexes Diamantschneidelement.

Title (fr)  
Élément de coupe diamanté convexe.

Publication  
**EP 0351952 B1 19940420 (EN)**

Application  
**EP 89306150 A 19890616**

Priority  
• SG 152394 A 19941019  
• US 22141088 A 19880719

Abstract (en)  
[origin: EP0351952A2] A diamond insert (30) for a rotary drag bit (10) comprises an insert stud body (32) with a first base end and a second cutter end. The cutter end of the insert is formed in a convex or spherical shape (42) of polycrystalline diamond material (40). The convex layer of diamond (42) is oriented relative to an axis of the stud body with a negative rake angle from 0 DEG to about 45 DEG , inclusive. A plurality of such inserts (30) mounted in the cutting face (17) of a drag bit (10) cut earth formation with reduced friction and good cooling of the polycrystalline diamond.

IPC 1-7  
**E21B 10/56**

IPC 8 full level  
**E21B 10/56** (2006.01); **E21B 10/567** (2006.01)

CPC (source: EP US)  
**E21B 10/5673** (2013.01 - EP US)

Cited by  
GB2393987A; GB2393987B; US11105158B2; US9771497B2; US7108064B2; USD951313S

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